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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/671,549	09/29/2003	Kyung Hoon Lee	K-0544	4278
34610	7590	11/08/2004	EXAMINER	
FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153			MANOHARAN, VIRGINIA	
			ART UNIT	PAPER NUMBER
			1764	
DATE MAILED: 11/08/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/671,549

Applicant(s)

LEE ET AL.

Examiner

Virginia Manoharan

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-15 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 16-19 is/are rejected.
- 7) ☒ Claim(s) 5-9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

### DETAILED ACTION

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

The specification had not been checked to the extent necessary to determine the presence of all possible minor errors e.g., typographical, grammar, idiomatic, syntax and etc. Applicants' cooperation are requested in correcting any errors of which applicants may become aware in the specification.

Claims 16-19 are objected to because of the following informalities: The claimed "the bonded phrase" in claim 16 lacks antecedent support.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2 and 16 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lai et al (6,790,318) or Jennings et al (4,265,860).

Either Lai et al or Jennings et al anticipates or render obvious the claimed “..purification apparatus having a mobile phase distillation part; a mobile phase liquefaction part; and a purification part disposed between the mobile phase distillation part and the mobile phase liquefaction part, for removing impurities of to-be-purified material..” as broadly claimed in claim 1; and further the method comprising the steps of: “distilling a mobile-phase solvent; liquefying the distilled solvent; mixing the liquefied solvent with the to-be-purified material; removing impurities from the mixture using the bonded phase; sending the purified material, in which the impurities are removed by the bonded phase, to the mobile phase distillation part; and extracting the purified material from the mobile phase distillation part “as broadly claimed in claim 16. See Fig. 1 and columns 3-5 of Lai et al; and the claims at columns 5 and 6 of the Jennings et al reference.

Claims 3-4 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jennings et al (4,265,860) or Lai et al (6,790,318) in view of Wright et al (5,147,538).

Jennings or Lai is discussed supra.

That the liquefaction part of Jennings or Lai is a reflux condenser as claimed e.g., in claim 4 would have been obvious to one of ordinary skill in the art in order to minimize solvent losses due to evaporation as taught by Wright et al. See e.g., column 9, lines 5-

7 of the Wright's reference. See also column 9, lines 40-46 of Wright et al e.g., for the feature of claim 18. Claim 3 cannot be distinguished from the prior art in the structural sense.

Claims 5-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 10-15 are allowed.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Spring et al discloses an extractor for Soxhlet solid-liquid extraction.
- b. Schachter et al discloses a method and apparatus including a quartz flask and a Soxhlet extractor.

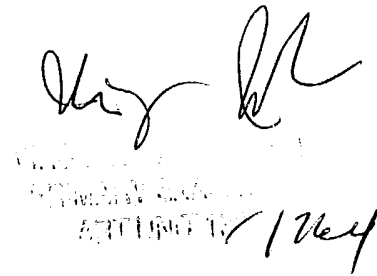
Any inquiry concerning this communication or earlier communications from the examiner should be directed to V. Manoharan whose telephone number is (571) 272-1450. The examiner can normally be reached on Tuesday--Friday from 9:30 a.m. to 6:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1764

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

V. Manoharan/dh  
November 4, 2004



A handwritten signature is written over a circular official stamp. Below the signature, the word "ATTORNEY" is printed, followed by a handwritten checkmark and the name "V. Manoharan".